

## § 154.1810

(2) The information required by § 170.110 of this chapter.

[CGD 74-289, 44 FR 26009, May 3, 1979, as amended by CGD 79-023, 49 FR 51010, Nov. 4, 1983]

### § 154.1810 Cargo manual.

(a) No person may operate a foreign flag vessel, whose flag administration does not issue IMO Certificates, on the navigable waters of the United States, or a U.S. flag vessel, unless the vessel has on board a cargo manual containing the following information:

(1) A description of each cargo carried, its handling hazards as a liquid or as a gas including frostbite or asphyxiation, its safety equipment and necessary first aid measures required by this part.

(2) A description of the dangers of asphyxiation from the inerting gases used on the vessel.

(3) The measures that mitigate embrittlement of steel structure in way of cargo leakage.

(4) The use of the firefighting systems on the vessel.

(5) The features of the cargo containment system that affect its operation and maintenance, including pressure and temperature ranges and relief valve settings.

(6) Pressures, temperatures, and liquid levels for all operations.

(7) General information derived from the first loading of the vessel.

(8) Alarm settings.

(9) Descriptions of the components of the cargo system, including the following:

(i) Liquid cargo system.

(ii) Liquid recirculating or condensate return system.

(iii) Cargo tank cool-down system.

(iv) Cargo tank warm-up or vaporization system.

(v) Gas main system.

(vi) Cargo tank or compressor relief system and blocked liquid or gas relief system.

(vii) Inerting system.

(viii) Boil-off gas compressor or reliquefaction system.

(ix) Gas detection systems.

(x) Alarm or safety indication systems.

(xi) Cargo jettisoning system.

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(xii) The system for using boil-off gas as fuel.

(10) A description of cargo loading and discharge operations, including simultaneous handling of multigrades of cargo and ballast.

(11) A description of cargo operations during the voyage.

(12) A description of cargo tank cool-down and warm-up operations including purging with inert gas and air.

(13) A description of hull and cargo tank temperature monitoring systems.

(14) A description of gas detection systems and alarm or safety systems.

(15) A description of the following conditions and their symptoms, including emergency measures and corrective actions:

(i) Cargo or ballast valve malfunction.

(ii) Low cargo tank gas pressure.

(iii) High fill level shutdown.

(iv) Gas compressor shutdown.

(v) Hull cold spots.

(vi) Cargo piping leaks.

(vii) Primary or secondary barrier failure.

(viii) Hold boundary structural failure.

(ix) Fire in vent mast head.

(x) Reliquefaction plant failure.

(xi) Vaporizer malfunction or failure.

(xii) Piping or cargo valve freeze-up.

(16) Any other matters relating to operation of the cargo systems.

(17) The operational means to maintain the vessel in a condition of positive stability in accordance with the loading and stability manual under § 154.1809 through all conditions of:

(i) Loading and deballasting; and

(ii) Unloading and ballasting.

(b) The master shall ensure that the cargo manual is kept up-to-date.

### § 154.1812 Operational information for terminal personnel.

The master shall ensure that terminal personnel are told the operational information required by § 154.1810(a)(17).

### § 154.1814 Cargo information cards.

(a) No person may operate a vessel unless a cargo information card for each cargo being transported is carried either in the wheelhouse, in the ship's